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| 10/775,089 | 02/11/2004 | Suk-Kyun Hur | 46316 | 1189 |

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WASHINGTON,, DC 20036

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| EXAMINER |
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LE, LANA N

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| ART UNIT | PAPER NUMBER |
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2618

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/19/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/775,089

Applicant(s)

HUR, SUK-KYUN

Examiner

Lana N. Le

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 11-23 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 12, 17, 18, 29, 30 and 35 is/are rejected.
- 7) ☐ Claim(s) 2-5, 13-16, 19-23 and 31-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 1/18/07 with respect to the restriction requirement have been fully considered but they are not persuasive.

Regarding applicant's traverse to the restriction requirement, the examiner respectfully disagrees. For example, with regards to species 2, there is no disclosure of the manual mode in species two (claims 6-10 and 24-28). Since species 2 includes species 1 as identified by applicant's representative, species 2 is examined without objection below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steel et al (US 6,782,244) (hereinafter Steel).

Regarding claim 1, Steel disclose in a wireless communication device having at least two amplifiers for amplifying transmit power for a mobile station (col 2, lines 40-65), a method of controlling the amplifiers, comprising the steps of: deciding an amplifier to be enabled or disabled between the at least two amplifiers; and enabling or disabling

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the decided amplifier (col 8, lines 46 - col 9, line 67; fig. 6). Steel further discloses the segmented power amplifier can also be implemented in other communications equipment (col 9, lines 61-67). Steel does not explicitly disclose a base station. However, since Steel suggest the implementation of the power amplifier in other communications equipment as is well known and notoriously old in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the segmented power amplifier in a base station in order to have a repeater station which allows selection of reducing or strengthening the power of transmitted signal to reduce potential interference with nearby wireless terminals.

Regarding claim 18, Steel disclose in a wireless communication device (fig. 4) having at least two amplifiers (124, 204; figs. 3, 4) for amplifying transmit power for a mobile station, an apparatus for controlling the amplifiers, comprising: a channel combiner (128; col 8, lines 12-45; col 5, lines 37-48) for measuring total power for each sector of the wireless communication device (see fig. 3); and a sleep mode operator (controlling system; col 2, lines 42-48) for deciding (sending i.e. enable signal 21, 22; fig. 4) whether to enable or disable the at least two amplifiers based on the measured power (fig. 6; col 7, lines 46-65).

4. Claims 11 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steel et al (US 6,782,244) (hereinafter Steel) in view of Chen et al (US 5,832,365) (hereinafter Chen).

Regarding claims 11 and 29, Steel disclose the method and apparatus of claims 1 and 18 respectively, wherein the sleep mode operator receives a time period set by

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the operator and decides an amplifier to be enabled or disabled according to input from the operator for the time period. In the same field of endeavor, Chen discloses a base station (fig. 1) which allows operator programmable control of the amplifier signal strength based on the user input via operator's interface 10a, 10 to transmit amplifier 18 at the time period in which the user decides the power level of the amplifier needs to be adjusted (col 2, lines 41-60; col 4, lines 30-40; col 6, lines 43-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to set the amplifier gain in order to allow the user the option to decrease the power of the signal transmitted to avoid potential interference to nearby wireless terminals as suggested by Chen (col 2, lines 5-10).

5. Claims 17 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steel et al (US 6,782,244) (hereinafter Steel) in view of Chen et al (US 5,832,365) (hereinafter Chen) and further in view of Loke et al (US 6,615,028).

Regarding claims 17 and 35, Steel, Chen disclose the method and apparatus of claims 11 and 29 respectively, wherein they do not disclose the step of deciding an amplifier to be enabled or disabled comprises: determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics. Loke et al disclose a step of deciding an amplifier to be enabled or disabled comprises determining automatically an amplifier to be enabled or disabled by calculating the number of required amplifiers according to required power and amplifier characteristics (col 2, lines 36-59; col 3, lines 3-23; col 10, line 43 – col 11, line 35). It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to determine automatically an amplifier to be enabled or disabled based on required power and amplifier characteristics in order to increase the efficiency of the amplifier module as suggested by Loke et al.

6. Claims 12 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steel et al (US 6,782,244) (hereinafter Steel) in view of Chen et al (US 5,832,365) (hereinafter Chen) and further in view of Harris et al (US 6,055,418).

Regarding claims 12 and 30, Steel disclose the method and apparatus of claims 1 and 18 respectively, wherein they do not disclose the sleep mode operator decides the amplifier to be enabled or disabled according to the ID of an amplifier input by the operator. In related art, Harris et al disclose changing the operational status of an amplifier based on the identified module address field of the power amplifier (col 4, lines 53-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ID of an amplifier in Steel in order to identify and point out which amplifier is to be enabled at the time as suggested by Harris et al.

Allowable Subject Matter

7. Claims 2-5, 13-16, 19-23, and 31-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 19, Steel disclose the apparatus of claim 18, wherein Steel and the cited prior art fail to disclose the sleep mode operator comprises:

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a storage for storing parameters needed for control of the amplifiers and the number of current operating amplifiers; a calculator for calculating the number of required amplifiers based on required power, the number of the operating amplifiers, and a predetermined compensation parameter; and

a controller for controlling the at least two amplifiers to be in the enable or disable states according to the number of required amplifiers according to a predetermined algorithm.

Regarding claims 2 and 20, Steel disclose the method and apparatus of claims 1 and 18 respectively, wherein Chen disclose the step of deciding an amplifier to be enabled or disabled comprises: deciding the amplifier to be enabled or disabled according to an input from the operator.

However, Steel, Chen, and the cited prior art fail to disclose further:

determining whether the decision of the amplifier to be enabled or disabled according to the input from the operator is right or wrong.

Regarding claim 13, Steel, Chen, and Harris disclose the method of claim 12, wherein Steel, Chen, Harris and the cited prior art fail to disclose further:

determining whether the decision of the amplifier to be enabled or disabled is right or wrong.

Regarding claim 31, Steel, Chen, and Harris disclose the apparatus of claim 30, wherein Steel, Chen, Harris and the cited prior art do not disclose the sleep mode operator determines whether the decision of the amplifier to be enabled or disabled is right or wrong.

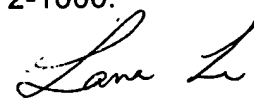
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNL


4-15-07
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Primary Examiner
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